



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

B

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/147,914	05/25/1999	AHARON MEIR EYAL	U-012130-1	2425
140	7590	10/17/2006	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			OH, TAYLOR V	
			ART UNIT	PAPER NUMBER
			1625	
DATE MAILED: 10/17/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/147,914

Applicant(s)

EYAL ET AL.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1625

Final Rejection

The Status of Claims

Claims 37-68 are pending.

Claims 37-68 are rejected.

Claim Rejections-35 USC 103

1. Applicants' argument filed 8/02/06 have been fully considered but they are not persuasive.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The rejection of Claims 37-68 under 35 U.S.C. 103(a) as being unpatentable over Powell et al (US 3,202,705) in view of Walkup et al (US 5,252,473) has been maintained.

Art Unit: 1625

The rejection of Claims 37-68 under 35 U.S.C. 103(a) as being unpatentable over Powell et al (US 3,202,705) in view of Walkup et al (US 5,252,473) is maintained for the reasons of the record on 5/02/06.

Applicants' Argument

2. Applicants argue the following issues:

1. None of the prior art teach the step (a) or the step (b), which are related to using the protonated cation exchanger and yielding a second product of a basic form of the cation of said the lacate salt ;
2. Powell's exchanger is not contacted with a lactic acid salt and cations from a lacate salt are not bound to the cation ion exchanger resin ; furthermore, this process does not form a second product of a basic form of the cation of said the lacate salt;
3. Walkup's exchanger is not used for the hydrolysis process, but for preventing the contamination of the catalyst; furthermore, there is no need for the regeneration of the catalyst ;therefore, there is no formation of the second product of the basic form of the cation of said the lacate salt ;
4. There is no motivation to combine the prior art .

Applicants' arguments have been noted, but the arguments are not found to be persuasive.

Art Unit: 1625

First, regarding the first and second arguments, the Examiner has noted applicants' argument. However, the primary prior art, Powell, expressly teaches the regeneration of the exhausted cation resin as shown in the paragraph below (see col. 4 ,lines 16-22):

the term regenerated to the hydrogen cycle as used herein is intended to mean any treatment of the exhausted cation resin which provides the resin with cations, usually hydrogen ions but not limited thereto, which can be exchanged for cations in the process liquor.

Furthermore, Powell has pointed out that the cation exchange resin itself can be used to acidify the calcium lactate in the process liquor (see col. 5 ,lines 21-23); from this passage ,it does imply the formation of the second product of the basic form of the cation of said the lactate salt from the process liquor. Therefore, the primary Powell prior art is still relevant to the claimed invention.

Second, regarding the third argument, the Examiner has noted applicants' argument. However, applicants have admitted that " Walkup also describes producing lactic acid by hydrolyzing a lactic acid ester using an acidic resin catalyst with sufficient temperature and pressure (col. 14 ,lines 34-57)" in the amendment filed on 8/02/06 ; furthermore, regardless of how the Walkup's acidic resin catalyst is employed in the prior art as the secondary use, the fact has still remained unchanged , which is that the Walkup's acidic resin catalyst can be "a suitable catalyst for lactic ester hydrolysis " (see col. 14, lines 43-44). From this, it opens up other possibility that it may be able to form the second product of the basic form of the cation of said the lactate salt from the process liquor since ,as the result of the lactic ester hydrolysis process, the resultant

Art Unit: 1625

mixture may contain the second product. This may depend on the type of the cation exchanger used in the process although the prior art recommends it to be the Amberlyst 15 resin (see col. 14 ,line 42). Therefore , applicants' argument is irrelevant to the issue of the claimed invention.

Third, regarding the fourth argument, the Examiner has noted applicants' argument. However, Powell advocates the process for producing the color stable lactic acid from the fermentation process liquor by means of the regenerative cation exchanged resin due to its contributing role of enhancing color stability (see col. 3 ,lines 19-22). Similarly, Walkup et al teach the further purification of the lactic acid by using the CO₂ catalysis of ammonium lactate and alcohol solution from the fermentation process liquor in the presence of the acidic ion exchange resin along with the application of the simple distillation process.

Both prior art processes are commonly involved in using the cation exchange resin in the purification of the lactic acid for the purpose of producing a suitable pure feed material. Therefore, there is motivation to combine the prior art .

Thus, it would have been obvious to the skilled artisan in the art to be motivated to incorporate Walkup's et al CO₂ catalysis of ammonium lactate and distillation into the Powell's process so as to improve further its purity. This is because the skilled artisan in the art would expect such a modification to be successful as guidance (see col. 3 ,lines 19-22 in Powell) and (see col. 2 ,lines 46-48 in Walkup et al

Art Unit: 1625

) shown in both prior art. Therefore, applicants' argument is irrelevant to the issue of the claimed invention.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

Art Unit: 1625

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie can be reached on 571-272-0670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Taylor Victor Oh, MSD, LAC
Primary Examiner
Art Unit : 1625

10/14/06